

IN THE CLAIMS

Please amend claim 1 as follows:

1. (Currently Amended) A method of marking a packet stream including a plurality of data packets from a source comprising the steps of:

determining a sending rate estimate, s ;

determining any credits or debits for the packet stream; and

probabilistically marking a the packet stream to one of a plurality of priority levels based on the sending rate estimate, s .

2. (Original) The method of claim 1 wherein the step of marking comprises the steps of:

determining if the sending rate estimate is less than a first rate threshold; and

in response to a determination that the sending rate estimate is less than the first rate threshold, setting a probability of marking at least one data packet with a first selected priority level is one of a plurality of priority levels.

3. (Original) The method of claim 2 further comprising the step of:

in response to a determination that the s is less than the first rate threshold, incrementing a burst size.

4. (Original) The method of claim 1 wherein the step of marking comprises the steps of:

determining if the sending rate estimate is between a first rate threshold (FRT) and a second rate threshold; and

in response to a determination that the sending rate estimate is between a first rate threshold and a second rate threshold, setting a probability of marking a data packet with a subordinate priority level based on s.

5. (Original) The method of claim 1 wherein the step of marking comprises the steps of:

determining if the sending rate estimate is between a first rate threshold (FRT) and a second rate threshold; and

in response to a determination that the sending rate estimate is between a first rate threshold and a second rate threshold, marking a data packet such that a rate of packets marked a subordinate policy level is no greater than $1 - (FRT/s)$.

6. (Original) The method of claim 1 wherein the step of marking comprises the steps of:

determining if the sending rate estimate is above a second rate threshold (SRT);
and

in response to a determination that the sending rate estimate is above the SRT, marking the packet such that a rate of packets marked the second priority level is at least $(SRT - FRT)/s$.

7. (Original) The method of claim 6 further comprises the step of:

in response to a determination that the sending rate is above the SRT, marking the packet such that a rate of packets marked a lowest priority level is at least $(s-SRT)/s$.

8. (Original) The method of claim 1 further comprising the steps of:

determining if the sending rate estimate is greater than a rate threshold;

in response to a determination that the sending rate estimate is greater than the rate threshold, determining if a burst size is greater than a minimum burst; and

in response to a determination that the burst size is greater than the minimum burst, marking the packet a first priority level.

9. (Original) The method of claim 8 further comprising the step of:

in response to a determination that the burst size is greater than the minimum burst, decrementing the burst size.

10. (Original) The method of claim 1 further comprising the steps of:

determining if the sending rate estimate is greater than the super rate threshold,
determining if a burst size is greater than a minimum burst; and

in response to a determination that the burst size is greater than a minimum burst,
marking the packet a priority level based on a count of packets marked a highest priority
level during a period.

11. (Original) The method of claim 10 further comprising the step of:

in response to a determination that the burst size is greater than the minimum
burst, decrementing the burst size.

12. (Original) An apparatus for marking a packet stream including a plurality of
data packets from a source comprising:

a means for determining a sending rate estimate, s ; and

a means for determining any credits or debits for the packet stream; and

a means for probabilistically marking a the packet stream to one of a plurality of
priority levels based on the sending rate estimate, s .

13. (Original) The apparatus of claim 12 wherein the means for marking
comprises:

a means for determining if the sending rate estimate is less than a first rate
threshold; and

a means for setting a probability of marking at least one data packet with a first selected priority level to a first value, said means responsive to a determination that the sending rate estimate is less than the first rate threshold, wherein said first selected priority level is one of a plurality of priority level.

14. (Original) The apparatus of claim 13 further comprises:

a means for incrementing a burst size, in response to a determination that the s is less than the first rate threshold.

15. (Original) The apparatus of claim 12 wherein the means for marking comprises:

a means for determining if the sending rate estimate is between a first rate threshold (FRT) and a second rate threshold; and

a means for setting a probability of marking a data packet with a subordinate priority level based on s, said means responsive to a determination that the sending rate estimate is between a first rate threshold and a second rate threshold.

16. (Original) The apparatus of claim 12 wherein the means for marking comprises:

a means for determining if the sending rate estimate is between a first rate threshold (FRT) and a second rate threshold; and

a means for marking a data packet such that a rate of packets marked a subordinate priority level is no greater than $1 - (FRT/s)$ in response to a determination that the sending rate estimate is between a first rate threshold and a second threshold.

17. (Original) The apparatus of claim 12 wherein the means for marking comprises:

a means for determining if the sending rate estimate is above a second rate threshold (SRT); and

a means for marking the packet such that a rate of packets marked the second priority level is at least $(SRT - FRT)/s$, in response to a determination that the sending rate estimate is above the SRT.

18. (Original) The apparatus of claim 17 further comprises:

a means for marking the packet such that a rate of packets marked a lowest priority level is at least $(s - SRT)/s$, in response to a determination that the sending rate is above the SRT.

19. (Original) The apparatus of claim 12 further comprises:

a means for determining if the sending rate estimate is greater than a rate threshold;

a means for determining if a burst size is greater than a minimum burst, in response to a determination that the sending rate estimate is greater than the rate threshold; and

a means for marking the packet a first priority level, in response to a determination that the burst size is greater than a minimum burst.

20. (Original) The apparatus of claim 19 further comprises:

a means for decrementing the burst size, in response to a determination that the burst size is greater than the minimum burst.

21. (Original) The apparatus of claim 12 further comprises:

a means for determining if the sending rate estimate is greater than a super rate threshold;

a means for determining if a burst size is greater than a minimum burst, in response to a determination that the sending rate estimate is greater than the super rate threshold; and

a means for marking the packet a priority level based on a count of packets marked a highest priority level during a period, in response to a determination that the burst size is greater than a minimum burst.

22. (Original) The apparatus of claim 21 further comprising:

a means for decrementing the burst size, in response to a determination that the burst size is greater than the minimum burst.

23. (Original) A method to determine probability for marking a packet a priority level comprising the steps of:

determining a first probability;

determining at least one second probability; and

weighting each probability so that each probability contributes to a net probability.